

ART. III.—*The Phanerogamia of the Mitta Mitta Source Basin.*

ARTICLE II.

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[Read 13th March, 1884.]

CHORIPETALEÆ HYPOGYNÆ.

RANUNCULACEÆ (A. L. de Jussieu).

Clematis microphylla (De Candolle).—On the steep ranges west from junction of Livingstone Creek and Mitta River, on argillaceous schist formation, a variety, *Stenophylla*, is occasionally met with. This species covers many shrubs with its clusters of cream-coloured blossoms; it ascends to 3000 feet elevation; on the moist southern coastal regions in Mitchell River source-basin it is more abundant. The same remark applies to *C. aristata*.

Ranunculus rivularis (Banks et Solander).—This variable species is very common on damp situations within this area, particularly on Wilson's Creek, near Omeo; mica-schist formation; on the alluvium at Omeo Plains and on the Victoria River, ascending in the valley of the latter to 4000 feet.

Ranunculus parviflorus (Linné).—On the marshy sub-alpine flats near heads of Livingstone Creek this small-flowered species is abundant, but it occurs also on damp situations near Omeo. It is very much affected by a fungus—*æcidium ranunculacearum*.

Ranunculus aquatilis (Linné).—The races near Omeo used for mining purposes are frequently so much choked up with the vigorous growth of this species and some species of *Chara* and *Conferva* as to require periodical cleaning; nearly all the shallow waterholes about Omeo are more or less full of a growth of this species.

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Caltha introloba (F. v. M.).—This dwarfed, stemless herb is restricted to the snowy regions at elevations of 5000 to 6000 feet at the source-runnels of the Cobungra River, on the edge of the basaltic plateau, Bogong High Plains; also at Mount Hotham, 6015 feet; Mount Latrobe, at 6200 feet elevations.

DILLENIACEÆ (Salisbury).

Hibbertia stricta (R. Brown).—This widely-distributed species is found on the sandy soils and gravelly banks near the junction of Livingstone Creek and Mitta Mitta River at 1600 feet elevation.

Hibbertia linearis (R. Brown).—Common along with *H. diffusa* on the open sunny northern slopes of mica-schist formation near Omeo Plains, at 3000 feet elevations.

MONIMIEÆ (A. L. de Jussieu).

Atherosperma moschatum (Labillardière).—See pt. 1, p. 5.

Hedycarya Cunninghami (Tulasne).—This is the "Rurnai" of the Gippsland aborigines, used by them for procuring fire—twigs being rubbed together for that purpose.

CRUCIFERÆ (A. L. de Jussieu).

Barbarea vulgaris (R. Brown).—Frequent on damp cultivated ground, and on springy spots along the western affluents of Livingstone Creek, on metamorphic-schist formation; at elevations of 1600 to 3000 feet.

Arabis glabra (Crantz).—At elevations of 2000 to 3000 feet on Livingstone Creek, at higher elevations on the Cobungra and Victoria Rivers; generally on bluffs or rocky sidelings of granitic or gneissic schist.

Cardamine dictyosperma (Hooker).—In moist crevices of felspathic rocks, Wilson's Creek, near Omeo; 2500 feet elevation.

VIOLACEÆ (De Candolle).

Viola Caleyana (G. Don).—Common on Hinnomunjie Flat, on alluvium, and on the Livingstone Creek rangés; ascends to 3200 feet, and probably to higher levels.

Hymenantha Banksii (F. v. M.).—The marked difference between the lowland and alpine form of this shrubby species renders it an object of interest to the phyto-grapher; at elevations of from 3000 to 5000 feet it

forms a procumbent shrub, hard-wooded and strongly spinous, the berries larger, and paler purple in colour than the arboreous lowland form.—See pt. 1, p. 5.

PITTOSPOREÆ (R. Brown).

Marianthus procumbens (Bentham).—Is occasionally met with on the open spurs from the Dividing Range toward the head of Livingstone Creek, where the metamorphosed schists merge into the Silurian slates; at elevations of 3000 to 4000 feet.

Billardiera longiflora (Labillardière).—In scrubby situations along the Dividing Range, on Silurian formation, particularly where there is much vegetable mould, climbing over branches of *Lomatia ilicifolia* and *Pittosporum bicolour*; it ascends, near Mount Phipps, to 4000 feet.

DROSERACEÆ (Salisbury).

Drosera auriculata (Backhouse).—On damp, grassy, and mossy depressions at the summit of Mount Sisters; 3000 to 3600 feet elevation; in metamorphic or intrusive granite formation.

Drosera peltata (Smith).—Common on damp pastures near Omeo, at elevations of from 2000 to 3000 feet. In an interesting paper read before the Field Naturalists' Club, by my friend Mr. Sullivan, of Moyston, the fact of the absorption of insect substance by the leaves of our Australian Droseraceæ is questioned, and the results of experiments detailed. I have now to state, that recent observations made by me by the aid of a powerful microscope on the leaves of *D. peltata* (and upon which insects had been smothered by the infolding of the tentacular hair and the secretion of a viscid fluid from their terminal glands), clearly indicated absorption taking place through the cells forming the cuticle of the leaf, apparently by a process of endosmose. The insects were representatives of the Diptera.

HYPERICINÆ (J. de St. Hilaire).

Hypericum Japonicum (Thunberg).—All over the undulating ranges, near Omeo, on mica-schist formation; on the Omeo Plains, alluvium, and ascending on the flats along the upper course of the Victoria River; granitic areas, up to 4000 feet.

POLYGALEÆ (A. L. de Jussieu).

Comesperma volubile (Labillardière).—This twining species is more common on the coast regions of the Mitchell River basin; apparently rare on the Mitta Mitta affluents. A few plants are met with on the Dividing Range, near Mount Phipps, in scrubby localities of Silurian formation, at elevations of 3000 to 4000 feet.

Comesperma ericinum (De Candolle).—Very abundant on the auriferous areas; Dry Gully near Omeo, particularly on stony northern slopes, near junction of intrusive granite and metamorphic schists; at 2000 to 3000 feet elevations.

TREMANDREÆ (R. Brown).

Tetradlea ciliata (Lindley).—Sparsely distributed on sandy soils near the head of Livingstone Creek, at 3000 feet elevations; more abundant in the Wentworth Valley; its bright carmine-coloured petals render it easily distinguishable amid its sombre-coloured foliage. It is extremely sensitive to moisture, closing its petals (like some species of *Helipterum* and *Helichrysum*) on damp or rainy days, and opening again with the sunshine.

RUTACEÆ (A. L. de Jussieu).

Zieria Smithii (Andrews).—See pt. 1, p. 7.

Boronia Algida (F. v. M.).—This shrubby species is abundant at high elevations—for instance, on the sources of Big River, and on the rocky, rolling ridges towards Bogong High Plains at 5000 to 6000 feet elevations; also near the summit of Mount Hotham. It appears to be governed in its distribution more by climatic conditions than by character of soil.—See pt. 1, p. 7.

Eriostemon Crowei (F. v. M.).—Var. *Exalata*.—On granitic areas, near the junction of the Cobungra and Big Rivers; at about 3000 feet elevation.—See pt. 1, p. 7.

Eriostemon phyllicifolius (F. v. M.).—This somewhat dwarfed species is found growing on the quartz-porphry formation near Mount Sisters at elevations of about 3000 feet, and on Dividing Range toward Mount Tambo.

Eriostemon ozothamnoides (F. v. M.).—On the river gravels at the junction of Livingstone Creek and the Mitta Mitta River, thence ascending along the margins of the

Big River, Cobungra River and Bundara River; on granitic and argillaceous schist areas up to 5000 feet. The plant is very much stunted at the higher elevations.

Eriostemon trachyphyllus (F. v. M.).—Common on Silurian soils along crest of Dividing Range at heads of Livingstone Creek; 4000 feet elevation; more abundant and gregarious on the upper sources of Wentworth River, there forming dense scrubs, 20 feet high, to the total exclusion of other vegetation.

GERANIACEÆ (A. L. de Jussieu).

Geranium Carolinianum (Linné).—Abundant near Omeo on the soft mica-schist areas; up to 3000 feet. Baron von Mueller thinks that the Australian plant might be kept distinct as *G. pilosum* (Forster).

Oxalis corniculata (Linné).—Common all over the lower ridges of the eastern watershed of the Livingstone Creek; up to 3000 feet.

EUPHORBIACEÆ (A. L. de Jussieu).

Poranthera microphylla (Brongniart).—All over the area this widely-spread species is abundant. On the mica-schist formation near Omeo it attains a height of only 3 or 4 inches; but on the Silurian ranges near Grant it frequently grows to a height of 10 to 12 inches.

Micranthemum hexandrum (J. Hooker).—A robust shrub 10 to 12 feet high; at the junction of Livingstone Creek and Mitta Mitta River.

Bertya Cunninghamsi (Planchon).—In similar locality to *M. hexandrum*, and on lower levels along Mitta Mitta River.

CASUARINEÆ (Mirbel).

Casuarina quadrivalvis (Labillardière).—This species, so common in littoral regions in the upland, is here met with in the granite area of the Mount Sisters, near Omeo Plains, at 3000 feet elevation.

SAPINDACEÆ (A. L. de Jussieu):

Dodonaea viscosa (Linné).—The var. *attenuata* is common on the Mitta Mitta at Hinnomunjie Flat on tertiary gravels; the leaves have a sour and bitter taste.

STACKHOUSIÆ (R. Brown).

Stackhousia pulvinaris (F. v. M.).—A dwarfed species most abundant on the basaltic (tertiary) tablelands, Paw Paw and Precipice Plains, 4000 feet elevation, and on the ledges of the higher Bogong High Plains, at 5000 feet.

PORTULACEÆ (A. L. de Jussieu).

Claytonia Australasica (J. Hooker).—In cliffs of granite-porphry rocks on summit of Mount Brothers, north of Omeo Plains, at 4600 feet elevation.

CARYOPHYLLIÆ (Linné).

Stellaria multiflora (Hooker).—In fern-tree gullies of the Dividing Range, near Tongio Gap, at an altitude of 3800 feet.

Colobanthus Benthamianus (Fenzl).—On the highest Alps only.

Scleranthus biflorus (J. Hooker).—At higher elevations on the Victoria and Cobungra Rivers up to 5000 feet. *S. minaroides* occupies places 5000 to 6500 feet high on the sources of the Mitta Mitta.—See pt. 1, p. 9.

CHORIPETALEÆ PERIGYNÆ.

LEGUMINOSÆ (Haller).

Oxylobium ellipticum (R. Brown).—At the head of Benambra Creek; on stony ridges; Silurian formation; at 3800 to 4400 feet elevation.

Oxylobium alpestre (F. v. M.).—In similar situations with *O. ellipticum*, but more abundant on the other side of the Limestone Creek; on the porphyritic rocks of Mount Cobboras, at about 6000 feet elevation.

Daviesia corymbosa (Smith).—Abundant on the warmer northern slopes of Dry Gully watershed, near Omeo; on metamorphic-schist formation; at about 3000 feet elevations.

Pultenaea daphnoides (Wendland).—On ridges of the Dividing Range, forming the eastern watershed of the Livingstone Creek; sparsely distributed on heathy localities at elevations from 2600 to 6000 feet; more abundant on the Tambo River, towards the coast region.

- Pultenaea subumbellata* (Hooker).—On the Dividing Range, toward Mount Hotham, at about 4000 feet elevations; generally on mica-schist formation.
- Bossiaea microphylla* (Smith).—On the granitic area near the head of Livingstone Creek, at 3000 to 4000 feet elevation, but more abundant in the Dargo River Valley; at lower levels from 1000 to 2000 feet, on Silurian areas.
- Bossiaea prostrata* (R. Brown).—Common on the undulating ranges around Omeo, especially in the neighbourhood of felspathic intrusions.
- Hovea longifolia* (R. Brown).—A robust bush, at the junction of the Livingstone Creek and the Mitta Mitta River, attaining a height of 12 feet; ascending along the banks of the Cobungra and Big Rivers to 4000 feet.
- Lotus australis* (Andrews).—More abundant on the sub-alpine ridges east of Victoria Plains.—See pt. 1, p. 10.
- Indigofera australis* (Willdenow).—Nowhere gregarious within the area, but met with almost at all elevations up to 5000 feet. The purgative properties attributed to this plant elsewhere are not so strongly marked here.
- Swainsona phacoides* (Bentham).—On the banks of Day's Creek, near Omeo, in the neighbourhood of quartzitic schists; prevalent.
- Glycine clandestina* (Wendland).—Abundant on the eastern watershed of the Livingstone Creek, twining over low shrubs; ascends to 4000 feet elevations.
- Kennedyia monophylla* (Ventenat).—This pretty creeper is very abundant all over the area under the name of "Native Sarsaparilla;" it is said to possess medicinal properties, the roots being used to make a tonic beverage; ascends to 5000 feet, as well on grass lands as on rocky slopes.
- Kennedyia prostrata* (R. Brown).—Sparsely distributed on the Omeo Plains tableland, and on the ranges near Omeo; generally at elevations from 2000 to 3000 feet.
- Acacia siculiformis* (Cunningham).—Found on granitic areas along the margin of the Big River; up to 4000 feet elevations.—See pt. 1, p. 11.
- Acacia juniperina* (Willdenow).—On coarse, gritty, and sandy soils; decomposed from intrusive granite, near the sources of Livingstone Creek; at 3000 to 4000 feet elevations.

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Acacia lunata (Sieber).—At the junction of the Livingstone Creek and the Mitta Mitta River; on tertiary gravels and alluvium.

Acacia penninervis (Sieber).—Forms on the crest of the Dividing Range; at the head of Livingstone, and on the Wentworth River falls a dense scrub; most abundant on Silurian areas; at 2000 to 4000 feet elevations.

Acacia dealbata (Link), "silver wattle."—On undulating Ranges, near Omeo; closely allied to *A. decurrens*.

ROSACEÆ (A. L. de Jussieu).

Acæna ovina (Cunningham).—A common herb on the Omeo Ranges, where it attains a height of 2 feet; ascending on the metamorphic-schist formation to 4000 feet.

CRASSULACEÆ (De Candolle).

Tillæa verticillaris (De Candolle).—Common on the dry gneissic schists near Omeo; on crevices of these rocks; ascends to 4000 feet elevations.

SALICARIEÆ (Adanson).

Lythrum Salicaria (Linné).—On Morass Creek, near Omeo Plains.—See pt. 1, p. 12.

HALORAGEÆ (R. Brown).

Haloragis teucroides (A. Gray).—Common on the granite area near Tongio Gap, at 2600 feet, and on mica-schist ranges near Omeo.

Myriophyllum pedunculatum (Hooker).—On the mossy beds at sources of Victoria River, at about 4000 feet elevations, and in water races near Omeo.

MYRTACEÆ (Adanson).

Bæckea Gunniana (Schauer).—On the eastern slopes of the Bogong High Plains; along watercourses at about 6000 feet elevation.—See pt. 1, p. 12.

Leptospermum attenuatum (Smith).—Common on the Silurian soils near the Mitta Mitta River, at about 2000 feet elevations, and on the Livingstone Creek; in mica-schist formation at higher elevations.

Kunzea peduncularis (F. v. M.).—On source-runnels of the

Bundara and Big Rivers; in swampy localities at 4000 to 5000 feet.

Eucalyptus Gunnii (J. Hooker).—This species was named by me incorrectly in the first list as *E. amygdalina*; and the alpine species, *E. pauciflora*, as *E. alpina*. This correction in the nomenclature is necessary to be here given, as misapprehension might arise as to the distribution of *E. alpina*, which, as Baron von Mueller informs me, is restricted to the summit of Mount William, in Victoria.

Eucalyptus hemiphloia (F. v. M.).—See Part I, p. 13, as *E. melliodora*.

Eucalyptus piperita (Smith).—See Part I, p. 13, as *E. fissilis*.

Eucalyptus stellulata (Sieber).—Locally known as "Black Sally."—See pt. 1, p. 14.

Eucalyptus amygdalina (Labillardière).—This species is abundant in moist, southerly slopes, along with *E. globulus*; ascending to fully 4000 feet; on metamorphic-schist formation.

RHAMNACEÆ (A. L. de Jussieu).

Pomaderris vacciniifolia (Reisseck).—Confined to the mica-schist bluffs of Livingstone Creek, near Omeo; elevation of 2100 feet.

UMBELLIFERÆ (Morison).

Azorella cuneifolia (F. v. M.).—On the spagnum beds at the head of the Victoria River; in basaltic formation (tertiary); at elevations of 4000 to 5000 feet.

Huanaca hydroctylea (Bentham).—With the former plant; also northerly to Bogong High Plains; on wet, marshy upland flats; from 4000 to 6300 feet.

Apium prostratum (Labillardière).—In crevices of felsitic rocks at Day's Creek, near Omeo, at about 2000 feet elevation.

Seseli Harveyanum (F. v. M.).—This somewhat aromatic herb is common on the moist, grassy upland flats near Mount Cope, and on the Bogong High Plains, at elevations of 5000 to 6000 feet.

Aciphylla glacialis (F. v. M.).—On the Bogong High Plains; also on the basaltic plateaux at Mount Hotham, and on the slopes of Mount Cope, at about 6000 feet elevations.

SYNPETALEÆ PERIGYNÆ.

SANTALACEÆ (R. Brown).

Thesium Australe (R. Brown).—On the undulating ridges between Lake Omeo and the Mitta Mitta River; on argillaceous schist formation; at elevations from 2600 to 3000 feet.

Choretrum lateriflorum (R. Brown).—On ranges west of the Mitta Mitta, toward Mount Wills; argillaceous schist formation; at about 3000 feet elevation, and on the heads of Benambra Creek toward the Limestone Creek watershed, at about 4000 feet elevation.

Exocarpos cupressiformis (Labillardière).—The “turndun” of the Gippsland blacks is made from the wood of this species.—See pt. 1, p. 15.

PROTEACEÆ (A. L. de Jussieu).

Persoonia Chamæpeuce (Lhotsky).—Abundant on the undulating metamorphic schistose ranges of the western watershed of the Livingstone Creek, near Omeo; ascending to about 4000 feet.

Orites lancifolia (F. v. M.).—A handsome shrub, restricted to the rocky summits of the Great Dividing Range, and of the high lateral ranges, such as Mount Hotham, Mount Cope, Mount Latrobe (Bogong); in Silurian formation.

Grevillea ramosissima (Meissner).—At the junction of Livingstone Creek and Mitta Mitta; ascending on the granitic area of the Big River to about 3000 feet elevations.

Hakea eriantha (R. Brown).—On the lower levels of the Mitta Mitta source-basin, principally on gneissic schist and in the Silurian formation; ascends to about 3000 feet.

CAPRIFOLIACEÆ (Adanson).

Sambucus Gaudichaudiana (De Candolle).—This native elder is common on moist, rocky situations on the Dividing Range, near the heads of the Victoria River, at from 3000 to 5000 feet.

COMPOSITEÆ (Vaillant).

Brachycome diversifolia (Fischer and Meyer).—Common all over the hills near Omeo, ascending to about 4000 feet.

- Brachycome decipiens* (J. Hooker).—Very common all over the area, flowering during early summer, ascending to about 5000 feet.
- Brachycome angustifolia* (Cunningham).—Abundant on the pasture land toward Omeo Plains; from 2400 to 3000 feet elevations; generally on alluvial areas.
- Calotis scabiosifolia* (Sonder and Mueller).—On the ranges east and west from Omeo and on the Victoria and Omeo Plains this species is prevalent; at elevations of 2000 to 3000 feet; proving troublesome to sheep-farmers owing to awns of the pappus getting entangled in the wool of the sheep.
- Aster alpicola* (F. v. M.).—On the higher ranges at the sources of Cobungra and Bundara Rivers, near Mount Cope; from 4000 to 6000 feet elevations; in Silurian and metamorphic-schist areas, and on Livingstone Creek, Omeo.
- Aster stellulatus* (Labillardière).—At the heads of Benambra and Livingstone Creeks, in palæozoic soils, ascending to about 5000 feet.
- Aster florulentus* (F. v. M.).—On the ranges west from Omeo and on the upland flats at Benambra Creek.
- Aster celmisia* (F. v. M.).—Near Mount Hotham at about 6000 feet elevation; on Silurian formation, and on the Bogong High Plains, in basaltic areas from 5000 to 6000 feet. This species is very abundant and gregarious, sometimes almost to the exclusion of every other plant.
- Gnaphalium Japonicum* (Thunberg).—On the slopes of Mount Cope, Mount Wells, Mount Latrobe (Bogong); at elevations of 4000 to 6000 feet; in granitic and Silurian formation.
- Leontopodium catipes* (F. v. M.).—On the summit of Mount Hotham, and on high peaks near it; at about 6000 feet elevation; in Silurian formation.
- Podolepis longipedata* (Cunningham).—Common on the grassy valleys at eastern watershed of the Livingstone Creek and the Mitta Mitta River; in mica-schist formation; ascends to about 3000 feet elevations.
- Podolepis acuminata* (R. Brown).—Abundant on grass land around Omeo; ascends to about 5000 feet along the upper sources of the Victoria, Cobungra, and Big Rivers; on mica schist, in granitic and Silurian formation.
- Helichrysum rosmarinifolium* (Lessing).—On the Livingstone Creek and Mitta Mitta River, and many of their tribu-

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- taries; ascends to about 5000 feet, but nowhere gregariously, nor restricted to any formation.
- Craspedia Richea* (Cassini).—Common on the ranges near Omeo and on the Victoria River up to about 5000 feet; also on Flourbag and Precipice Plains.
- Abrotanella nivigena* (F. v. M.).—On the eastern slopes of the Bogong Plains, from 4000 to 6000 feet; in Silurian and metamorphic areas.
- Senecio Georgianus* (De Candolle).—On the ranges near Omeo, and on the Mitta Mitta River; in Silurian and metamorphic areas, on moist, shaded sidelings; ascends to about 4000 feet.
- Cymbonotus Lawsonianus* (Gaudichaud).—Very abundant all over the area, but most prolific on Silurian soils in shaded sidelings; ascends to about 6000 feet.
- Erechtites hispidula* (De Candolle).—On the rich alluvium at Omeo Plains, at about 2600 feet elevations.
- Centaurea Australis* (Bentham).—In similar localities with the foregoing, and on the low hills near Omeo Plains; ascends to 3500 feet.
- Microseris Forsteri* (J. Hooker).—Common along Livingstone Creek and at the Omeo Plains; ascends to about 6000 feet; on the upper courses of Victoria and Cobungra Rivers.

CAMPANULACEÆ (A. L. de Jussieu).

- Lobelia simplicicaulis* (R. Brown).—On the granitic detritus near the heads of Livingstone Creek, at about 3500 feet elevation.
- Isotoma fluviatilis* (F. v. M.).—Common on the Morass Creek flats, near the Omeo Plains; in Silurian formation, growing in patches gregariously on the alluvial flats up to elevations of about 3000 feet.

GOODENIACEÆ (R. Brown).

- Goodenia hederacea*, var. *Cordifolia* (Smith).—On the quartz porphyry slopes of M'Farlane's Lookout, near Omeo, at about 3000 feet elevation. Baron von Mueller is inclined to restore this to specific rank.
- Vellea montana* (J. Hooker).—Common on the open grass land near the Omeo Plains and Mount Leinster, in metamorphic-schist and porphyritic-granite areas; from 3000 to 4000 feet elevations.

SYNPETALEÆ HYPOGYNÆ.

GENTIANEÆ (Necker).

Limnanthemum crenatum (F. v. M.).—In the Morass Creek, near Omeo Plains, this handsome species is abundant; the fringed crest of the lobes of the corolla distinguish it from the following species.

Limnanthemum geminatum (Grisebach).—Also on Morass Creek, in similar situations.

CONVOLVULACEÆ (A. L. de Jussieu).

Convolvulus erubescens (Sims).—Common on the ranges near Omeo, between 2000 and 3000 feet elevation.

Convolvulus sepium (Linné).—Abundant on reeds in Morass Creek, near Omeo; not ascending higher than 3000 feet within the area.

Dichondra repens (R. and G. Forster).—Very common on mica-schist formation near Omeo, and near the margins of the western affluents of the Mitta Mitta on gneissic schistose areas; ascends to 4000 feet.

SOLANACEÆ (Haller).

Solanum aviculare (G. Forster).—On the alluvium near the junction of Livingstone Creek and the Mitta Mitta River, and on the tertiary gravels of the latter stream at lower levels.

Solanum vescum (F. v. M.).—Common on the moist heads of gullies south of the Dividing Range; thence to the littoral regions.

SCROPHULARINÆ (Mirbel).

Veronica nivea (Lindley).—At the sources of the Big River, near Mount Latrobe (Bogong), and on adjoining highlands. This species is seen principally on granitic areas from 5000 to 6300 feet elevations.

Euphrasia Antarctica (Bentham).—At the Bogong High Plains, on the basaltic plateaux, at about 6000 feet elevations.

LENTIBULARINÆ (L. C. Richard).

Utricularia flexuosa (Vahl).—Sparsely distributed on damp, grassy flats near Omeo Lake, at about 2600 feet elevation.

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Utricularia dichotoma (Labillardière).—Common on moist slopes at the sources of springs, near Bogong High Plains, in Silurian and basaltic areas, at about 6000 feet elevation.

BIGNONIACEÆ (Ventenat).

Tecoma australis (R. Brown).—This handsome climber, so prolific in the littoral regions at the entrance to the Gippsland Lakes, ascends to elevations of about 3000 feet in this source-basin from the lower levels; generally in thickly wooded gullies.

ASPERIFOLIÆ (Haller).

Myosotis australis (R. Brown).—Common in similar localities with the following.

Myosotis sauveolens (Poiret).—Ascends to about 5000 feet elevations, towards the Bogong High Plains, along the western affluents of the Mitta Mitta.—See pt. 1, p. 21.

LABIATEÆ (Adanson).

Mentha laxiflora (Bentham).—On the Livingstone Creek, near Omeo, in the mica-schist formation, at elevations of 2000 to 3000 feet.

Scutellaria humilis (R. Brown).—Sparsely distributed on the flats toward the Livingstone Creek sources, from 3000 to 4000 feet.

Prostanthera lasiantha (Labillardière).—See pt. 1, p. 21.

Prostanthera rotundifolia (R. Brown).—See pt. 1, p. 21.

Prostanthera cuneata (Bentham).—This erect or dicumbent species is restricted to the higher elevations, on rocky situations, occurring toward Mount Latrobe, at about 6000 feet elevations; and on the Cobboras Mountains, in granitic and porphyritic areas.

Westringia senifolia (F. v. M.).—On the alluvium at the junction of the Livingstone Creek and Mitta Mitta; an erect, bushy shrub, 5 feet high.

VERBENACEÆ (Adanson).

Verbena officinalis (Linné).—Not common within the Mitta Mitta source-basin (there confined to the flats along the Livingstone Creek); on the Tambo River more abundant.

EPACRIDÆ (R. Brown).

- Styphelia collina* (Labillardière).—Common on the ridges dividing the western affluents of the Mitta Mitta, particularly in granitic areas; ascends to about 5000 feet.
- Styphelia Macraei* (F. v. M.).—Along the margins of the Mitta Mitta River and Livingstone Creek; ascends to about 5000 feet on the tributaries of the former. At the lower elevations this species attains a height of 10 feet; at higher places it becomes dwarfed, the branches get more densely pubescent, and the leaves are then less petiolated.
- Styphelia ericoides* (Smith).—On the upland flats at heads of the Livingstone Creek this species is very gregarious, forming a low, diffuse, heathy shrub; while on the porphyritic areas near Omeo Plains, from 3000 to 4000 feet elevations, it frequently attains a height of 3 feet, forming an erect, although bushy, shrub.
- Styphelia juniperina* (Sprengel).—This pretty shrub is most abundant on the Dividing Range at the head of Livingstone Creek; in Silurian formation, at about 4000 feet elevations, and is descending into the Livingstone Creek valley, in mica-schist formation, to 2000 feet.
- Brachyloma daphnoides* (Bentham).—Common on the northern stony slopes of Mount Livingstone, particularly in the neighbourhood of the auriferous belts of metamorphic schist, Dry Gully, Omeo, at elevations from 2000 to 4000 feet.
- Trochocarpa pumila* (F. v. M.).—On the granitic ridges at the junction of Cobungra and Big Rivers; at elevations of 3000 to 5000 feet.
- Epacris petrophila* (J. Hooker).—This low shrub is only met with at the higher elevations, not descending below 3000 feet. It is common on the upper sources of the Mitta Mitta, toward Mount Latrobe and the Bogong High Plains, at about 5000 feet elevations.
- Epacris paludosa* (R. Brown).—In similar localities with *E. petrophila*, but descending to 2000 feet elevations, as on the granitic area near the junction of the Big and Cobungra Rivers.
- Epacris heteronema* (Labillardière).—Along grassy gullies at the sources of the Cobungra and Big Rivers; in granitic, metamorphic, and Silurian areas; ascends to about 5000 feet, but becomes dwarfed and stunted at the higher elevations.

Richea Gunnii (J. Hooker).—Common on beds of spagnum on the Paw Paw and Bogong High Plains; in basaltic areas, from 4000 to 6000 feet height.

APETALEÆ GYMNOSPERMEÆ.

CONIFERÆ (Haller).

Nageia alpina (F. v. M.).—This is the only representative of the Coniferæ to be met with in this source-basin, and it appears to be restricted to the rocky alpine summits of the highest peaks, as Mount Wills, Mount Cope, and Mount Latrobe; in granitic and metamorphic schistose areas, of 5000 to 6500 feet. It extends easterly to the porphyritic summits of the Cobboras at about 6000 feet.

MONOCOTYLEDONEÆ.

CALYCEÆ PERIGYNÆ.

ORCHIDEÆ (Haller).

Dipodium punctatum (R. Brown).—This beautiful, leafless orchid is sparsely distributed over the dry, stony ridges within this area, being more abundant on the crests of the Silurian ridges on the littoral slopes of the Wentworth River, in the argillaceo-mica schist area, west of Lake Omeo, and on the Silurian ranges west from the Mitta Mitta River, toward Mount Wills; at elevations of 2000 to 4000 feet.

Spiranthes Australis (Lindley).—Abundant on the rich grass land at Mount Leinster Creek; on alluvial flats overlying granite-porphry formation, at elevations of 3000 to 4000 feet.

Thelymitra aristata (Lindley).—Common on the open pasture lands on Livingstone Creek, at elevations of about 2500 feet, in metamorphic-schist formation; ascends to fully 4000 feet.

Diuris maculata (Smith).—Very common along the Livingstone Creek, Cobungra, Victoria, Bundara, and Big River valleys; on grass land; up to 4000 feet.

Diuris pedunculata (R. Brown).—Abundant along with the preceding species, in similar localities, and ascending to 5000 feet.

- Prasophyllum patens* (R. Brown).—On undulating ridges near Omeo and the Victoria Plains; at elevations of 2000 to 4000 feet; on mica-schist and gneissose-rock formations.
- Pterostylis curta* (R. Brown).—In the Livingstone Creek valley, at elevations of 3000 feet, and lower, it is frequently to be met with, particularly on rich grass land.
- Caladenia Patersoni* (R. Brown).—This very variable species is only sparsely distributed along Livingstone Creek and at Omeo on plains and grass land; it ascends to 4000 feet.
- Glossodia major* (R. Brown).—Common on pasture lands on the Victoria, Cobungra, and Big River valleys; also, on Livingstone Creek, at elevations of 2000 to 4000 feet.

AMARYLLIDÆ (J. de St. Hilaire).

- Hypoxis hygrometrica* (Labillardière).—On the damp, rich flats of creeks flowing into the Livingstone Creek, in metamorphic-schist formation. It ascends to the higher plateaux, Paw Paw and Precipice Plains, at head of Victoria and Cobungra Rivers, in basaltic formation, at elevations of 4000 and 5000 feet.

CALYCEÆ HYPOGYNÆ.

LILIACEÆ (Haller).

- Drymophila cyanocarpa* (R. Brown).—Rare in this source-basin; on the crest of the Dividing Range, near the head of the Livingstone Creek, at about 4000 feet, in Silurian formation; more abundantly it occurs on ranges near Grant, in Mitchell River source-basin.
- Dianella revoluta* (R. Brown).—Common on the dry, humid slopes of Mount Livingstone, near Omeo; at an elevation of about 3000 feet, in gneissic and mica-schist formation; also, on the Dividing Range, near the heads of the Victoria River, at about 4000 feet.
- Wurmbea dioica* (F. v. M.).—This pretty little species is seen very abundantly during early spring on the pasture lands around Omeo and at Omeo Plains; in fact, everywhere on moist flats, up to 4000 feet.

46 *The Phanerogamia of the Mitta Mitta Source Basin.*

Bulbine bulbosa (Haworth).—This succulent annual is prolific on the grassy ridges near Omeo, at elevations of 2000 to 3000 feet.

Thysanotus tuberosus (R. Brown).—This handsome species is very abundant on the Mount Leinster Creek, near the Omeo Plains, on granite-porphry formation, at an elevation of about 3000 feet; it is also to be met with on the slopes of Day's Hill, near Omeo, at about 3500 feet, on intrusive quartz-porphry formation.

Cæsia vittata (R. Brown).—On rolling pasture-hills of the eastern watershed of the Livingstone Creek. This species is prevalent at elevations of 2000 to 3000 feet, in metamorphic-schist formation.

Tricoryne elatior (R. Brown).—On grassy edges of small streams flowing into Livingstone Creek, at elevations of 2000 feet; more abundant on the limestone area of Bindi, south of the Dividing Range.

Stypandra glauca (R. Brown).—On grassy flats along the Livingstone Creek (especially in tufts of *Poa cæspitosa*) this species is plentiful; it ascends to 4000 feet.

Xerotes longifolia (R. Brown).—On rocky slopes of the eastern watershed of the Livingstone Creek, on mica-schist formation, at elevations of about 3000 feet.

Xanthorrhœa australis (Smith).—Not frequent in this source-basin; confined to the dry, stony slopes of the Dividing Range, near Omeo, on argillaceo-mica-schist formation, at elevations of about 3000 feet; more abundant on granitic areas south of the Dividing Range.

TYPHACEÆ (A. L. de Jussieu).

Sparganium augustifolium (R. Brown).—Only known at present from Lake Omeo and Morass Creeks; at an altitude of about 3000 feet above the sea-level.

FLUVIALES (Ventenat).

Potamogeton natans (Linné).—This species was seen by me only in the waterholes of Wilson's Creek (eastern affluent of Livingstone's Creek), at an altitude of about 2200 feet; it is probable, however, that it is yet to be met with at higher elevations within this source-basin.

JUNCEÆ (R. Brown).

Luzula campestris (De Candolle).—Abundant almost all over the area, up to 5000 feet, in damp situations.

Juncus bufonius (Linné).—Along the banks of watercourses of the Livingstone Creek watershed, up to 4000 feet; particularly prolific on the soft mica-schistose formation near Omeo.

Juncus communis (E. Meyer).—Abundant on wet flats near Omeo, on metamorphic-schist formation, from 2000 to 3000 feet, and ascending to much greater elevations.

Juncus prismatocarpus (R. Brown).—Similar in its stations to *Juncus bufonius*.

RESTIACEÆ (R. Brown).

Restio australis (R. Brown).—On marshy alluvium at the head of Livingstone Creek, from 3000 to 4000 feet elevation, and along the Dividing Range, from Mount Tambo to Mount Cobboras and Mount Pilot, at about 6000 feet elevation; on marshy flats.

Calostrophus lateriflorus (F. v. M.).—On the source-runnels of the Cobungra and Bundara Rivers, intersecting Bogong High Plains; in basaltic areas. This species is abundant, and generally found growing on beds of spagnum, sometimes attaining a height of 3 feet.

ACALYCEÆ HYPOGYNEÆ.

CYPERACEÆ (Haller).

Kyllinga intermedia (R. Brown).—On the alluvial flats at the junction of the Livingstone Creek and the Mitta River, at about 1600 feet; not seen at higher elevations. It ascends to this station from the Murray River at lower levels.

Cyperus Eragrostis (Vahl).—On the granitic area at the junction of the Cobungra and Big Rivers, at about 2200 feet, and on the Mitta Mitta below its junction with the Livingstone Creek; on metamorphic-schist formation, at an altitude of 1000 to 1600 feet.

Cyperus lucidus (R. Brown).—Common on shaded hill-sides, at the sources of springs, on the Livingstone Creek; up to 4000 feet. On southern side of Mount Livingstone, at elevations of 3000 feet, it occurs in its greatest luxuriance, the stems frequently attaining a height of 5 feet.

Scripus polystachyus (F. v. M.).—On Morass Creek, near Lake Omeo, and on the Mitta Mitta River, at elevations from 1000 to 3000 feet.

Schœnus Brownii (J. Hooker).—On damp soils near Omeo.

Lepidosperma concavum (R. Brown).—Common on the rocky, exposed northern slopes of Mount Livingstone, near Omeo, at elevations of about 3000 feet, on mica-schist formation, and on the northern slopes of the Dividing Range, east from Omeo, in argillaceous-schist formation, at between 2000 and 4000 feet elevation.

Lepidosperma lineare (R. Brown).—In similar localities to *L. concavum*, and northerly toward Mount Leinster, on granitic-porphry formation, at elevations from 3000 to 4000 feet.

Uncinia tenella (R. Brown).—In shaded gullies among fern-trees on the Dividing Range, east from Omeo, in argillaceous-mica-schist formation, at elevations from 3000 to 4000 feet.

Carex acicularis (Boott).—On the Paw Paw tableland, in basaltic formation, at about 5000 feet, and on the heads of the Cobungra River, near Mount William, in argillaceous-schist formation, at elevations of about 6000 feet. This small species is abundant; it does not appear to descend within this source-basin below 4000 feet.

Carex inversa (R. Brown).—Common along the sandy alluvial flats of Livingstone Creek; at elevations of 2000 to 4000 feet.

Carex vulgaris (Fries).—On swampy flats and marshes along Wilson's Creek, near Omeo, ascending the Dividing Range to 4000 feet.

Carex acuta (Linné).—On the heads of the Cobungra, Victoria, and Big Rivers, at elevations from 3000 to 5000 feet.

Carex Buxbaumii (Wahlenberg).—On the upland flats near Mount Hotham and on the Bogong High Plains, at elevations from 3000 to 5000 feet, and on the Livingstone Creek and Omeo Plains, at about 3000 feet elevation. It appears to flourish best on rich basaltic soils in marshy localities. Identified with numerous other alpine plants already by Baron von Mueller, 1853-55.

Carex breviculmis (R. Brown).—On the eastern watershed of the Livingstone Creek, near Omeo, and on the Victoria Plains, at elevations from 2000 to 4000 feet, in mica-schist and metamorphic-granite areas.

- Carex longifolia* (R. Brown).—Common on marshy upland flats at Wilson's Creek, near Omeo, in metamorphic schistose formation, and along the flanks of Mount Livingstone, at elevations of about 3000 feet, and at higher elevations in the Australian Alps.
- Carex Pseudo-Cyperus* (Linné).—In similar localities with *C. longifolia*, and even more widely distributed in marshy localities at lower elevations; ascends to 4000 feet.

GRAMINEÆ (Haller).

- Panicum melananthum* (F. v. M.).—On the eastern margin of the Omeo Plains, near Mount Sisters, at elevations from 2000 to 3000 feet, and thence easterly in the Tambo River watershed to Bindi, at 1600 feet, in metamorphic, granite, and limestone (Middle Devonian) areas.
- Hemarthria compressa* (R. Brown).—Along margins of races on the Livingstone Creek watershed, near Omeo, on mica schists, at elevations from 2000 to 3000 feet.
- Andropogon refractus* (R. Brown).—On the Hinnomunjie Flats, at the junction of the Livingstone Creek and Mitta Mitta River, at about 1600 feet elevation. It appears to be emigrating to sub-alpine heights from the lower Mitta Mitta.
- Anthisteria ciliata filices* (Linné).—This, the well-known kangaroo grass, is, perhaps, the most abundant of the Gramineæ throughout the area, ascending from the undulating metamorphic ranges near Omeo to the higher basaltic plateaux at Paw Paw and Precipice Plains, and to the still higher Bogong High Plains, at about 6000 feet elevation. Near Omeo the stems are frequently seen to attain a height of 4 feet, and on shaded hillsides even 5 feet.
- Hierochloe redolens* (R. Brown).—A common species on the undulating ranges on eastern watershed of Livingstone Creek and at the Victoria Plains, and on the southern granitic slopes of mountains near the junction of Big River and Cobungra; it ascends to 5000 feet; that found near Omeo belongs to the variety called *Submutica*.
- Stipa scabra* (Lindley).—On the grassy slopes of the Dividing Range, on the eastern watershed of the Livingstone Creek, at Omeo Plains, and on the Victoria River; ascends to 4000 feet.

- Dichelachne crinita* (J. Hooker).—On shaded, grassy gullies, near Omeo, at elevations from 2000 to 3000 feet; abundant.
- Agrostis Solandri* (F. v. M.).—Very common within the area on the metamorphic-schist and Silurian formations, up to 4000 feet. This forms a good winter grass.
- Echinopogon ovatus* (Palizot).—Common on the Livingstone Creek, near Omeo, at about 2000 feet, and on the Victoria Plains and Omeo Plains, at 3000 feet elevation; ascends to 5000 feet.
- Aira cæspitosa* (Linné).—On the Livingstone Creek flats, very abundant, at elevations of about 2000 feet; ascends to 4000 feet. After bush fires this tussocky grass forms good forage.
- Trisetum subspicatum* (Palizot).—This alpine species is common on the upper affluents of the Mitta Mitta, on the grassy slopes of the higher plateaux at the heads of the Victoria, Cobungra, and Big Rivers, and on the moist flats at head of the Livingstone Creek; ascends to 6000 feet.
- Danthonia penicillata* (F. v. M.).—A common species on the slopes of Mount Cope, at 6000 feet; at the head of Cobungra River; on the undulatory rises of the Bogong High Plains, up to 6000 feet; and at the rocky ridges, near Mount Bogong, up to 6500 feet. Most prolific on the basaltic areas, but not restricted to this formation.
- Poa cæspitosa* (G. Forster).—This densely tufted and variable species is common all over the area on upland dry flats; ascends to 5000 feet. The stems attain a height of 5 feet in favourable localities, especially on the western watershed of the Livingstone Creek; at 2300 feet elevation.
- Poa dives* (F. v. M.).—On the southern slopes of shaded hillsides this erect grass attains a height of 12 feet. It is seen on the southern side of Mount Livingstone, and on the Big River, at elevations of 2000 to 5000 feet; also on the Dividing Range, near Tongio Gap, at 4000 feet. It appears to be most prolific on Silurian areas. The whole plant is succulent and tender, and if cultivated should form an excellent fodder grass.
- Festuca bromoides* (Linné).—Common on the ranges near Omeo at from 2000 to 3000 feet; at Omeo Plains, and generally on open situations in the area, up to 4000 feet; on dry, gneissic areas.

Festuca Hookeriana (F. v. M).—On the Bundara River, at about 3000 feet elevation; on the Benambra Creek uplands, to 4000 feet; thence easterly to the Cobboras Mountains; abundant on porphyritic areas. Forms at these stations one of the best pasture grasses.

Agropyron velutinum (Nees).—At the head of the Cobungra River, near Mount Hotham, on Silurian areas, from 4000 to 6000 feet, and on the Dividing Range, east of Omeo, at about 4000 feet.

Nearly the whole of the plants here enumerated were named by Baron von Mueller from specimens transmitted for this purpose to his office.